CLIMATE COMPETITIVE INDUSTRIES

INTERNATIONAL AND WBG EXPERIENCES IN STANDARDS AND LABELING FOR EE APPLIANCES

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MEXICO

LABELS

73 economies have adopted Standards and /or Labeling Programs

551 MEPS, 515 Comparative Labels, 350 Endorsement Labels

125 residential, commercial, and industrial products

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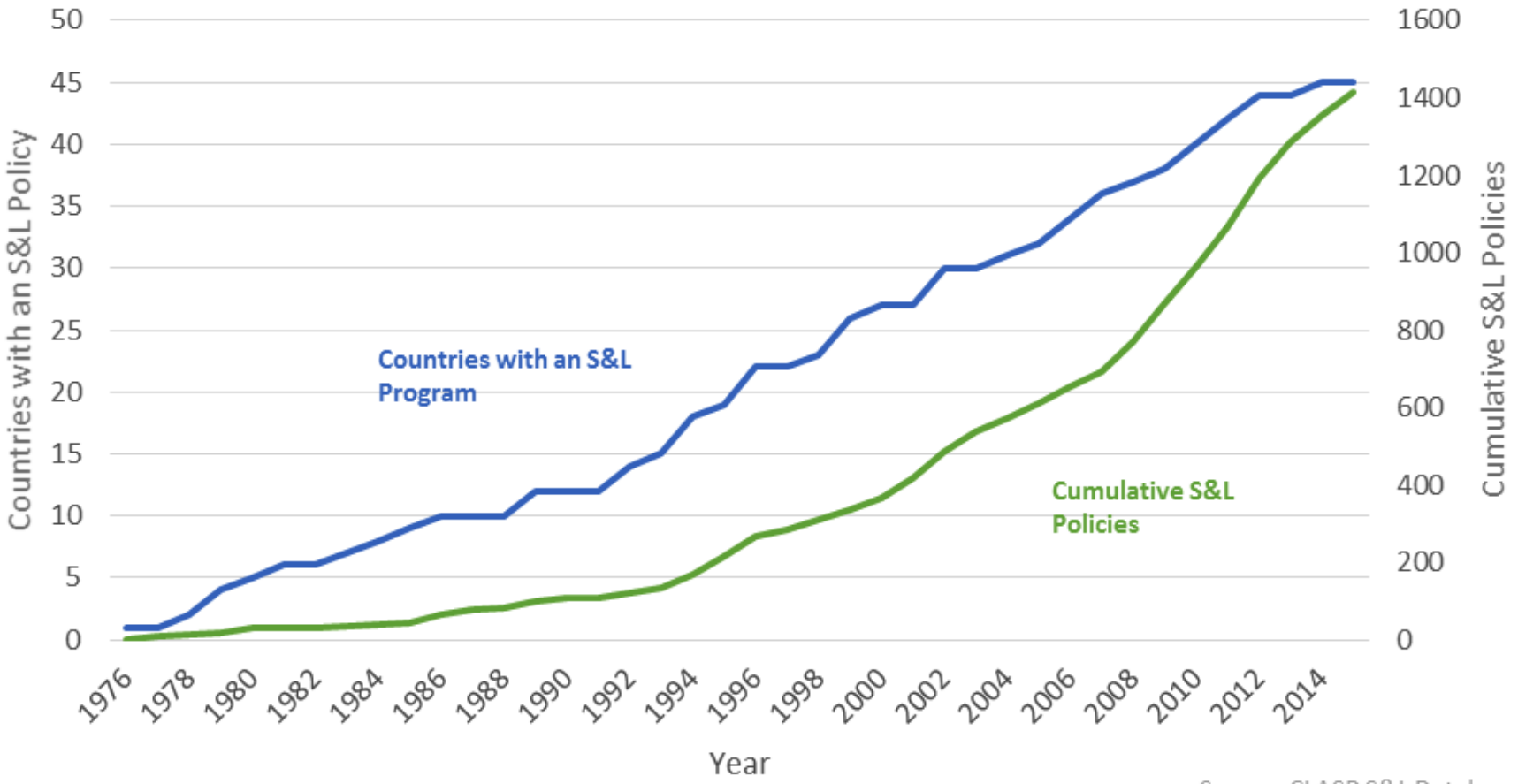
The Uptake of S&L Programs and Policies (excluding 28 EU countries)



Source: CLASP S&L Database.

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SAVINGS

12 percent of electricity consumption and 4 percent of end-use natural gas demand (USA)

6.2 terawatt hours of electricity within the residential sector (AUS/NZ)

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POTENTIAL

Global final energy consumption could be reduced by 9 percent OR 8,950 TWh per annum – equivalent to the output of 165 coal-fired power plants or 132 million cars

GHG emissions cut by 1.5 Gt CO2-E – an amount equal to 45% of all countries' NDCs

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…Why haven't all countries already adopted Standards and / or Labeling Programs?

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ADVANCES / PARTNERS

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UNEP

gef

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1. World Bank Group experience in Standards and Labeling

2. Challenges and opportunities

3. Harmonization and Labs

4. Technical and Financial Support

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The World Bank Group experience

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Climate Competitive Industries (CCI): Country-level S&L operational projects and knowledge transfer

Readiness for Investment in Sustainable Energy (RISE): data and indicators, aligned to SE4ALL

Global Environment Facility (GEF): financing

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CCI S&L: JORDAN (1/2)

Objective: to implement and "maintain" the eco-design and energy labeling regulations for electrical appliances taking into consideration the EU/ ACAA agreement in place

Products: non-directional household lamps, refrigerators and freezers, room air conditioners and automated washing machines

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CCI S&L: JORDAN (2/2)

Activities: Engage all relevant stakeholders, Develop a capacity assessment, Facilitate local authority communication with EC experts

Next steps: Explore support for market surveillance / effective implementation, Coordinate the work with partner donors, Training all relevant staff and institutions

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Challenges and Opportunities

Develop and Raise Energy Efficiency Standards

Energy efficiency not been prioritized in many countries until recently

Lack of available data on the status of markets in individual countries hinders the implementation process

Lack of adequate legal framework and institutional structures*

Local industry push back*

Lack of energy efficiency standards harmonization at the (sub)regional level

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Promote Efficient Products

Higher retail prices of energy efficient products when compared to inefficient products

Gaps in information*

Low or subsidized energy tariffs

Lack of incentives to local industry to invest in EE

Lack of incentives to importers to bring more EE products

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Improve Compliance and Enforcement

Lack of understating of the roles and coordination among various agencies involved*

Small markets → higher cost of compliance activities:

- Entry conditions (third-party testing)
- Market surveillance
- Verification testing

Large markets → bottle necks in compliance activities

Lack of testing infrastructure at the national and regional level*

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Assess impacts and improve outcomes

Lack of data to conduct a program evaluation → evaluations are not planned from the early stages of program design

Evaluations may not be conducted periodically or at a frequency to identity when standards are overdue*

Lack of awareness of the usefulness of a comprehensive program evaluation

- **Quantify program impacts**
- **Justify coverage or stringency improvements**
- **Ensure program continuity**

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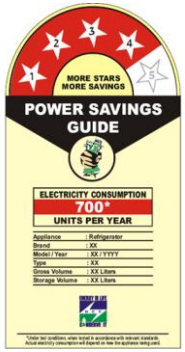
CASE: INDIA

2001-2002

Energy Conservation Act & establishment of Bureau of Energy Efficiency



2006

Voluntary Labeling program launched for refrigerators

2010

Mandatory Labeling for four products

2011

Endorsement Label Launched

2015

21 Products labeled & more to come

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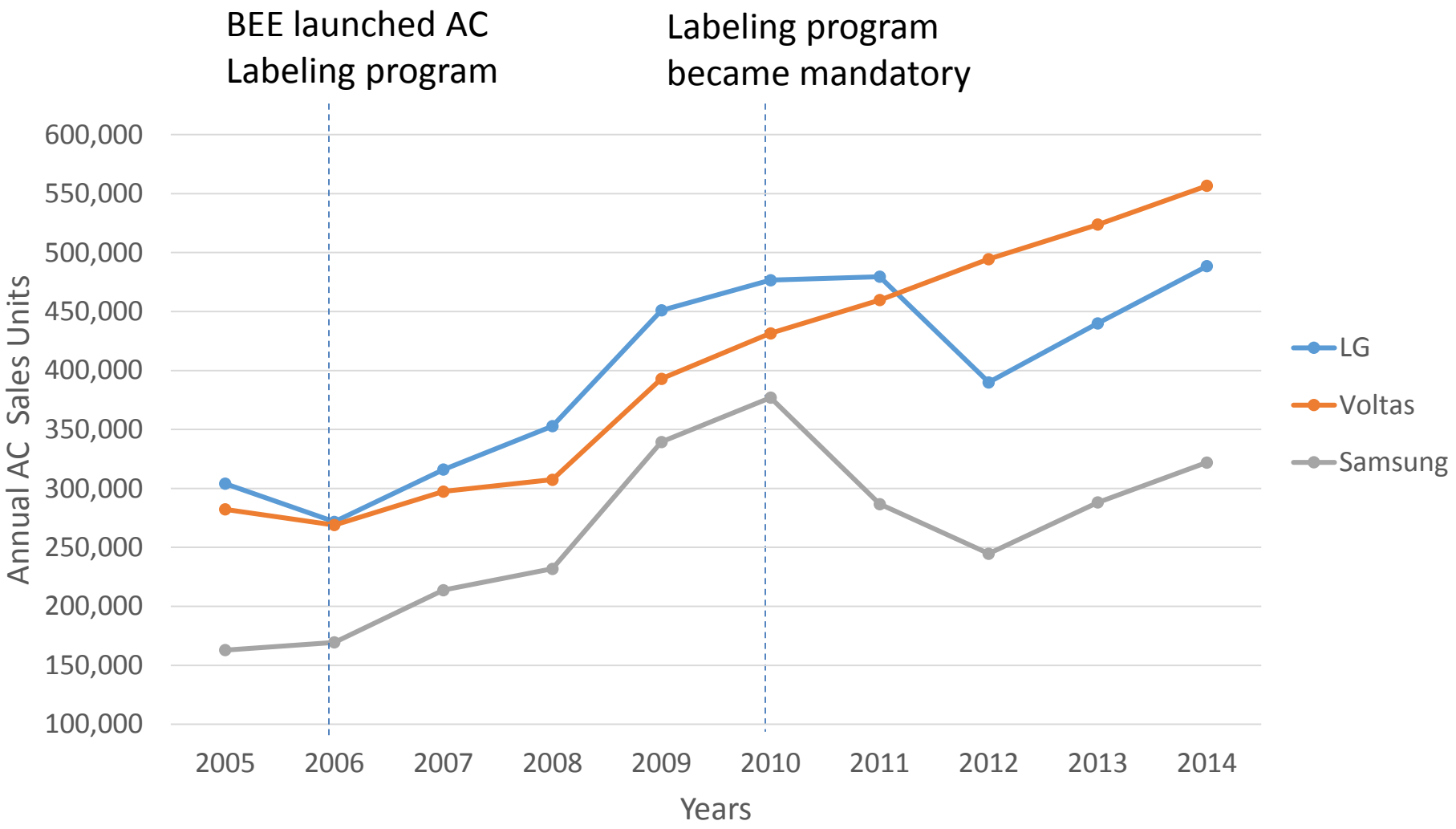
Case Study: Air Conditioner Sales in India

Annual sales of Air Conditioners of leading brands between 2005 and 2014 in India.



Source: Euromonitor, 2015

Harmonization and Labs

The major goal of harmonization is to reduce non-tariff trade barriers by:

- Simplifying and harmonizing customs procedures among countries.
- Harmonizing test procedures, labels, and standards.
- Implementing mutual recognition agreements.

Benefits of Harmonization:

- Can decrease program costs
- Removes trade barriers
- Avoid dumping of inefficient products on unregulated or under-regulated markets

Harmonizing Test Procedures

Most countries use (partly or wholly) standards from two international standards bodies: The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)

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EXAMPLES OF INTERNATIONAL ALIGNMENT IN S&L

Motors

- IEC 60034-30 standard establishes efficiency tiers
- Countries can easily increase stringency to accommodate changes in market and technologies
- Standards are comparable across economies

ENERGY STAR

- A voluntary endorsement label established by the US EPA and has been adopted by Australia, Canada, the EU, Japan, New Zealand, Switzerland, and Taiwan.
- Reduces burden for private sector participation

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WHY NOT ALIGN?

Alignment is not always practical or feasible. Some important differences among economies contribute to variations in policy coverage and stringency, such as:

- **Climate conditions**
- **Energy prices**
- **Product ownership**
- **Product usage patterns**

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Test Procedures are the foundation of any standards and labeling program as they are used to determine the energy use of a product.

Test procedures should:

- Reflect typical usage
- Yield repeatable and accurate results
- Be relatively inexpensive to perform

Test procedures can be developed either in country or adopted from an international body.

Testing should be conducted in an accredited laboratory to ensure that tests are being conducted properly.

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Setting up Laboratories is Expensive

Product	Costs
Refrigerators	**Capacity: can test 3 units simultaneously** Test equipment: $150,000 Staff training: $10,000 Equipment maintenance (calibration): $5,000 ***Total for the first year: $165,000***
Air Conditioners	**Capacity: 1 AC with power less than 5hp at a time, with calorimeter methodology** Test equipment: $600,000 Staff training: $20,000 Equipment maintenance (calibration): 7,000USD ***Total for first year: 637,000USD***

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Testing products is expensive

Indicative costs of testing in Australia by product (2012)

Appliance Type	Indicative Cost (A$)
Clothes Dryers	$2,800
Clothes Washers	$2,500
Compact Fluorescent Lamps	$13,100
Refrigerators	$7,600
Linear Fluorescent Ballasts	$2,100
Linear Fluorescent Lamps	$4,900
Distribution Transformers	$3,100
Televisions	$2,300
Electric Motors	$7,600
Air Conditioners	$8,300
Commercial Refrigerators / Display Cabinets	$13,500

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Document Testing in Denmark (1/2)

Laboratory tests can vary in costs: From 700€ to 4,000€ and more, plus administrative costs

Technical documentation costs vary from 400€ to 600€

To manage resources efficiently, first step of market surveillance typically involves inspecting documents

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Document Testing in Denmark (2/2)

Products	Costs for inspection of technical documentation as a percentage of the costs for laboratory testing	Remarks on test costs
Consumer electronics (TV, standby, external power supply)	25 – 30 %	Relatively low test costs.
Household washing machines and dishwasher	< 10 %	High test costs
Household refrigerators and freezers and motors	10 – 20 %	Medium test costs
Household driers and ovens	20 – 25 %	Medium test costs
Heat pumps	< 10 %	High test costs

Costs per inspection of technical documentation compared to the costs per laboratory testing

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Technical and Financial Support

Technical expertise or financial assistance is often available through bilateral and multilateral grants and loans for such activities as:

- assessing the potential benefits and costs of labels and standards
- establishing appropriate legal frameworks for labels and standards
- adopting test procedures, laboratory services, and labeling schemes
- setting cost-effective standards based on various analytical methodologies
- monitoring and reporting on labels and standards
- evaluating the impact of labels and standards
- participating in regional forums on harmonization of elements of labeling and standards-setting programs
- training government officials; utility company employees; product manufacturers, distributors, and salespeople; architects/designers; environmental activists; and/or consumers in any aspect of the design, development, implementation, and use of energy-efficiency labels and standards

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Several organizations have grant programs that offer technical expertise to developing countries specifically for creating energy-efficiency labeling and standards programs (1/2):

- **USAID** offers training and technical assistance for energy-efficiency labeling and standards programs for most countries establishing appropriate legal frameworks for labels and standards

- **The United Nations Department of Economic and Social Affairs**, through a grant from the **United Nations Foundation** assists all aspects of energy-efficiency labeling and standards programs worldwide

- The **United Nations Economic Commission for Latin America and the Caribbean** works with several Latin American countries using a parliamentary approach to enact legal and regulatory reform for energy standards

- The **Global Environmental Facility** (GEF) w/ UNEP & UNDP provides grants for greenhouse gas mitigation, including in standards and labeling

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Several organizations have grant programs that offer technical expertise to developing countries specifically for creating energy-efficiency labeling and standards programs (2/2):

- **The European Commission's Directorate General for Transport and Energy** sponsors projects to promote energy-efficiency programs, including labeling and transformation of the appliance market in European countries outside the E.U. It also has programs to foster collaboration on energy efficiency with Latin America and Asia

- The **IEA** conducts regional workshops and prepares publications to promote energy-efficiency standards and labels in non-IEA countries

- The **Energy Foundation** supports transitions to a sustainable energy future by promoting energy efficiency and renewable energy

- **UNF** has an environmental component in its charter and has provided direct grants for the development of standards-setting and labeling programs globally, most recently targeting China, India, and Brazil

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A Greener Path to Competitiveness: Policies for Climate Action in Industries and Products

A publication of the World Bank Group

In partnership with CLASP and The Carbon Trust

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Summer 2016

Disponible en Español

Thank you!

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ADDITIONAL SLIDES

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Our approach: Climate Competitive Industries / Green Competitiveness

World Bank Group response to climate change and sustainability challenges in the manufacturin sector

- 20% of GHG emissions from industries; 10% residential
- Existing technologies can save $600 billion a year for consumers and businesses
- CCI helps lower operating costs and mitigate environmental/ resource linked risks
- **Set up in 2013, CCI is WBG response to climate change and environmental challenges in industries**

- Target to reduce industrial GHG emissions by 1.2 million tons/ year by 2020
- Have saved firms and governments over $4 million in operating costs in the textile sector

CCI key figures FY16

$ 33.5 million

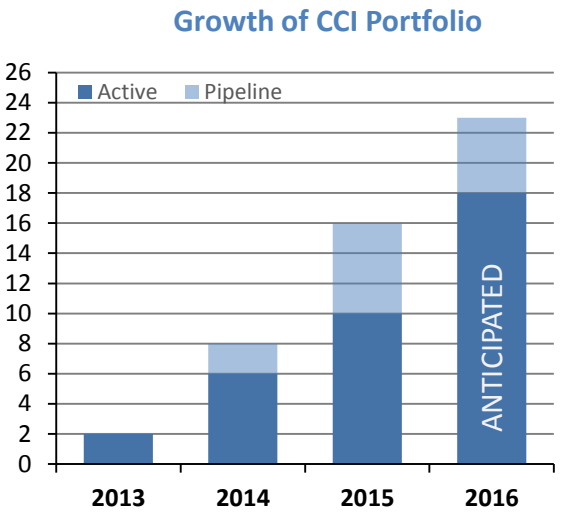
TOTAL PORTFOLIO

PROJECTS IN

18

COUNTRIES

5 IN PIPELINE



$ 6.5 million

COST SAVINGS to manufacturing firms and

$ 194.7 million

INVESTMENTS GENERATED

300,000 tons/ year

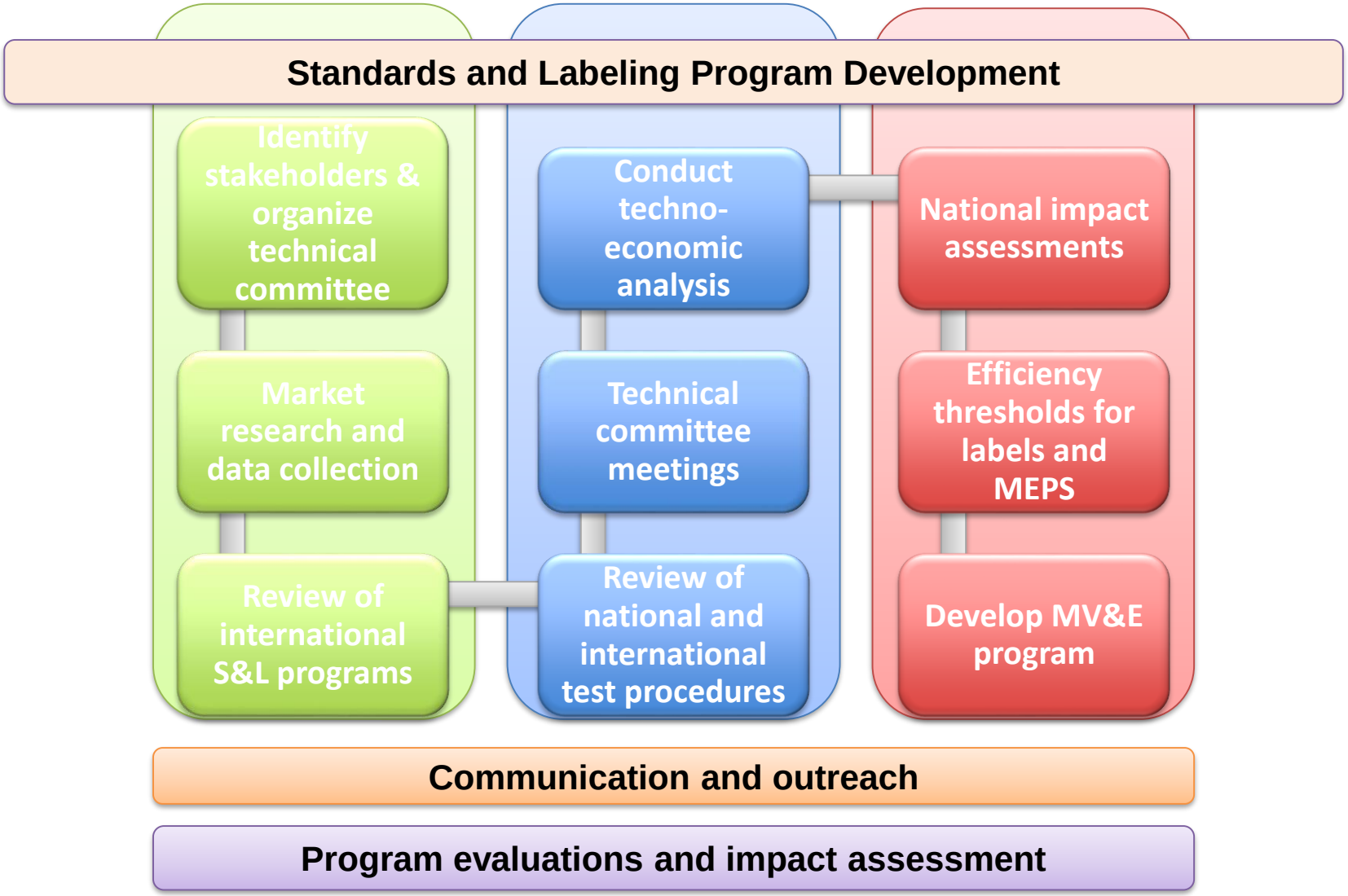
GHG EMISSIONS REDUCED

20 million tons/ year

TOTAL GHG REDUCTIONS

ANTICIPATED BY 2020

S&L Program Development



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